Calendar No. 884

110TH CONGRESS *2d Session*	SENATE	REPORT 110–422

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AUTHORIZATION ACT OF 2008

R E P O R T

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ON

S. 3270

JULY 16, 2008.—Ordered to be printed

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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED TENTH CONGRESS

SECOND SESSION

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AUTHORIZATION ACT OF 2008

JULY 16, 2008.—Ordered to be printed

Mr. INOUYE, from the Committee on Commerce, Science, and Transportation, submitted the following

REPORT

[To accompany S. 3270]

The Committee on Commerce, Science, and Transportation reports favorably an original bill to reauthorize the National Aeronautics and Space Administration, and for other purposes, having considered the same, and recommends that the bill do pass.

PURPOSE OF THE BILL

The purpose of the bill is to authorize programs of the National Aeronautics and Space Administration (NASA) for fiscal year (FY) 2009.

BACKGROUND AND NEEDS

In January 2004, the President announced the Vision for Space Exploration, a broad pronouncement that called for NASA to complete construction of the International Space Station (ISS), retire the Space Shuttle, develop a new, next generation crew vehicle, and return Americans to the Moon. Congress responded to the Vision for Space Exploration with the passage of the NASA Authorization Act of 2005 (P.L. 109—155). The legislation recognized the potential gap in U.S. human space flight capability created by the Administration's decision to retire the Shuttle in 2010 without having a new vehicle available until several years later. Congress expressed its concern about this gap and included measures to mitigate any potentially negative impact of the gap.

In 2008, NASA is no closer to narrowing the gap. The Administration is committed to retiring the Shuttle in 2010, but the new

Orion crew capsule and the Ares I rocket will not be available until approximately 2015. NASA Administrator Michael Griffin has stated that the agency may be able to accelerate the initial operating capability of Orion/Ares to 2013 if a total of $2 billion in additional funding were made available over the two year period of FY 2009 and FY 2010. Regardless, the United States will have to rely on the Russian-built Soyuz to deliver U.S. astronauts to the ISS during the gap.

NASA has initiated an alternative to relying on international partners to deliver cargo, and potentially crew, to the ISS — the Commercial Orbital Transportation Services (COTS) program. The COTS program is intended to facilitate private industry's development of space transportation capabilities. If successful, NASA would purchase launches and ISS resupply flights from domestic companies at a more affordable rate than what would be paid to foreign partners. The COTS program requires the private sector to demonstrate the development and operation of an end-to-end space transportation system of services, including ground operations and integration, launch, rendezvous, proximity operations, docking or berthing, orbital operations, reentry, and safe disposal or return. Currently, NASA has entered into agreements with two private partners for the development and demonstration of cargo resupply capabilities (known as COTS capabilities A, B, and C) but has yet to initiate the human crew component, or COTS capability D. While the prospects for a successful and rapid demonstration of capability D may seem remote, advocates believe that it may be a potential solution to narrowing the gap in U.S. human spaceflight capability. If a U.S. company can develop a vehicle that will take astronauts to the ISS, then NASA would not have to rely on the Russians.

The U.S. segment of the ISS is a critical component of NASA's research mission. In recognition of that, Congress declared the ISS a National Laboratory in the 2005 Authorization Act. Currently, NASA's budget projection for the support, operation, and utilization of the ISS ends after FY 2015. Although the Agency has publicly stated that they are not taking any actions that would preclude the operations of the ISS beyond 2015, the Committee believes that it is important for NASA to operate the ISS beyond 2015, especially if a U.S. capability to reach the ISS will not be available until then. A life span for the operation and utilization of the ISS to at least 2020 will ensure a greater return on investment for the United States and our international partners that have contributed to its construction.

The Committee is mindful of the impacts of transitioning from one flight system to another and has taken steps to address and mitigate those impacts in the legislation accompanying this report. The Committee has also taken note of the important roles and missions of all of NASA facilities and institutions and the need to clarify those roles and missions for the future. For example, the Michoud Assembly Facility represents a unique resource in the facilitation of the nation's exploration programs, and every effort should be made to ensure the effective utilization of that resource, as well as NASA's other centers and facilities.

SUMMARY OF PROVISIONS

The NASA Authorization Act of 2008 would provide a $19.2 billion baseline authorization of appropriations for FY 2009 to fund the various activities of the agency. The bill also would provide an additional $1 billion authorization of appropriations to accelerate the initial operational capability of a U.S. owned human spacecraft capability, an additional $200 million for ISS research, and an additional $150 million for the development of a commercial crew vehicle. The total authorization of appropriations would be $20.55 billion.

The bill would reaffirm Congress's support for the goals of U.S. space exploration policy, including activities related to Moon missions and Mars exploration, and express support for both international cooperation and commercial involvement in space exploration activities. The bill also would include a number of provisions to ensure that the United States has uninterrupted human access to space. Specifically, the bill would prevent the Administrator from retiring the Shuttle in 2010 if additional missions are remaining on the manifest, and it would require the Administrator to report to Congress on the steps, costs, and schedule for recertifying the Shuttle for flight beyond 2010. The bill also would express support for the COTS program and would direct the Administrator to establish a competition to develop a private sector capability to launch human crew. Recognizing that the Shuttle will eventually be retired, the bill would require the Administrator to establish a Space Shuttle Transition Liaison Office to assist local communities that would be affected by the Shuttle's retirement.

The ISS is an important component of the U.S. space program, and the bill would require NASA to develop a plan to support the operations of the ISS until at least 2020 to ensure that the ISS's scientific capabilities are utilized to the maximum extent. The bill would require the Administrator to establish an ISS Utilization Advisory Committee to assess and recommend scientific research to effectively utilize the ISS. The bill would establish a research fund of $200 million to support scientific research, including the development of flight hardware for experiments on the ISS. The bill also would require the Administrator to plan an additional Shuttle mission to deliver scientific experiments to the ISS.

Aeronautics is an important area of research and a critical component of NASA's mission. The bill would align NASA aeronautics research with the high-priority challenges described in the National Research Council's 2006 Decadal Survey of Civil Aeronautics. The bill would outline a series of aeronautics initiatives related to the research on and development of environmentally friendly aeronautics technologies, supersonic flight and the impact of sonic booms, and climate change.

Finally, the bill would include studies on field center leasing practices and project and work allocation; an interagency study of commercial space launch range facilities; a study on the impact of export control policies related to aerospace industry; an expression of support for the Near-Earth Object Survey to detect and identify near-Earth objects; a plan for utilizing the ISS for educational activities; the establishment of a program with universities on unmanned aerial vehicle development and applications; authorization

of $20 million in FY 2009 for the Experimental Program to Stimulate Competitive Research; authorization of $32 million in FY 2009 for the National Space Grant College and Fellowship Program; the establishment of an Office of Program Analysis and Evaluation to analyze and develop plans that would align the agency's mission, budget, and performance with strategic goals; an inventory of natural methane stocks and fluxes in the U.S. polar regions; a moratorium on reduction-in-force of civil servants before December 31, 2010; a limit on the use of term positions to equal or less than 10 percent of NASA's civil servants; a sense of Congress on the dilution, distortion, or suppression of scientific research; and a study by the Government Accountability Office on NASA compliance with Federal regulations on dissemination of scientific research to the public.

LEGISLATIVE HISTORY

On May 7, 2008, the Subcommittee on Space, Aeronautics, and Related Sciences held a hearing titled, "Reauthorizing the Vision for Space Exploration." At this hearing, the subcommittee considered the issues related to the Shuttle's retirement and the transition to the new Orion/Ares system, the impending gap in U.S. human access to space, and the need to ensure a healthy and balanced research program. The subcommittee heard testimony from one panel of witnesses, which included Mr. Eugene F. Kranz, Advisory Board Member of the Coalition for Space Exploration; Dr. Joan Johnson-Freese, Chairman of National Security Decision Making Department at the U.S. Naval War College; Dr. Frederick A. Tarantino, President of the Universities Space Research Association; Major General Robert S. Dickman, Executive Director of the American Institute of Aeronautics and Astronautics; and Mr. George T. Whitesides, Executive Director of the National Space Society.

On June 24, 2008, the Committee met in open Executive Session and, by a voice vote, ordered the Committee original bill be reported with amendments proposed by Senator Inouye and Senator Lautenberg.

H.R. 6063 is the companion bill that was introduced by Representative Udall in the House of Representatives on May 15, 2008. H.R. 6063 passed the House on June 18, 2008 by a recorded vote of 409-15.

Staff assigned to this legislation are Chan Lieu, senior Professional Democratic Staff, Ann Zulkosky, Democratic Professional Staff, and Jeff Bingham, Republican senior Advisor on Space and Aeronautics.

ESTIMATED COSTS

In compliance with subsection (a)(3) of paragraph 11 of rule XXVI of the Standing Rules of the Senate, the Committee states that, in its opinion, it is necessary to dispense with the requirements of paragraphs (1) and (2) of that subsection in order to expedite the business of the Senate.

REGULATORY IMPACT STATEMENT

In accordance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee provides the following evaluation of the regulatory impact of the legislation, as reported:

NUMBER OF PERSONS COVERED

The Committee believes the bill would not subject any individuals or businesses affected by the bill to any additional regulation.

ECONOMIC IMPACT

This legislation would not have an adverse impact on the Nation's economy. The legislation would authorize sufficient levels to sustain ongoing and new awards, cooperative agreements, and contracts related to NASA's missions.

PRIVACY

This legislation would not have a negative impact on personal privacy of individuals.

PAPERWORK

This legislation would not increase the paperwork requirement for private individuals or businesses. There are reports required of NASA. These reports are focused around specific critical areas of interest to the Committee and Nation.

CONGRESSIONALLY DIRECTED SPENDING

In compliance with paragraph 4(b) of rule XLIV of the Standing Rules of the Senate, the Committee provides that no provisions contained in the bill, as reported, meet the definition of congressionally directed spending items under the rule.

SECTION-BY-SECTION ANALYSIS

Section 1. Short Title and Table of Contents

This section would provide that the legislation may be cited as the National Aeronautics and Space Administration Authorization Act of 2008.

Section 2. Definitions

This section would define certain terms in the Act.

Section 3. Authorization of Appropriations

This section would authorize appropriations for NASA for FY 2009. In addition to the amounts in the table below, this section would authorize an additional $1 billion to accelerate the development of a U.S. human space vehicle, an additional $200 million for ISS research, and an additional $150 million for the development of a commercial crew vehicle.

Fiscal Year 2009	$ Millions
Science	4,932.2
Aeronautics Research	853.4
Exploration	3,886.0
Space Operations	6,074.7
Education	128.3
Cross Agency Support	3,299.9
Inspector General	35.5
TOTAL	**19,210.0**

Section 4. Reaffirmation of Space Policy

This section would reaffirm Congress's support of the goals of U.S. space exploration policy, including activities related to missions to the Moon and Mars exploration. This section also would support both international cooperation and commercial involvement in space exploration activities.

Section 5. Uninterrupted United States Human Spaceflight Capability

This section would require the Administrator to execute the remaining Shuttle missions before it is retired, regardless of the arbitrary retirement date of 2010. The Administrator would be required to discontinue activities, such as closing contracts for key parts, which would prevent the continued safe flight of the Shuttle beyond FY 2010. This section also would require the Administrator to submit, within 180 days after enactment of this Act, a report with detailed steps, schedule, and costs related to recertifying the Shuttle beyond FY 2010 until at least the end of FY 2015. In support of the COTS program, this section would direct the Administrator to establish a competition to complete the COTS-D vehicle demonstration program by September 30, 2011, or as soon after that date as possible. This section also would outline the details of the competition, including eligibility and the use of Space Act Agreements.

The Committee believes that the Shuttle should only be retired when the mission manifest has been completed. This means the Shuttle may need to fly beyond 2010 should unforeseen or uncontrollable events happen to cause the flight schedule to slip. Given the Columbia Accident Investigation Board's recommendation that the Shuttle undergo a recertification if it is to fly beyond 2010, the Committee would like to understand what activities a recertification entails, how significant an effort it would be, and how it compares to other Shuttle maintenance activities such as the Orbiter Maintenance Down Period. The Committee does not believe the Shuttle should be flown indefinitely, but simply would like to understand, in greater detail, how NASA defines recertification.

Section 6. Space Shuttle Transition

This section would require the Administrator to develop and submit a plan that details how NASA will dispose of the Space Shuttle Orbiters and associated hardware once the system has completed its missions and is retired. This section would establish a Space Shuttle Transition Liaison Office to assist local communities to

mitigate impacts due to the termination of the Space Shuttle program by offering technical assistance and information regarding alternate opportunities within Federal agencies.

Section 7. Aerospace Skills Retention and Investment Reutilization Report

This section would require the Administrator to analyze the facilities and human capital resources that will become available with the retirement of the Shuttle and identify on-going or future Federal programs or projects that would be able to leverage NASA facilities and human resources. The Administrator would be required to report on this analysis within 180 days of the date of enactment.

Section 8. Plan to Support Operations of the International Space Station Beyond Fiscal Year 2015

This section would require the Administrator to submit a plan that details the necessary steps required to continue the support of ISS operations through FY 2020. The plan would include an evaluation of critical hardware to support operations and research, anticipated maintenance, flight cargo manifest, and potential vehicles to deliver payloads to the ISS through 2020. The Committee is especially concerned that NASA does not have plans for operating the ISS after FY 2015. Given that NASA does not expect to have a U.S. capability to launch crew into orbit until 2015, the Committee finds the prospect of funding the construction of the ISS only to have it shut down once the United States can get there to be highly objectionable. The Committee believes that in order to maximize the return on investment for the United States and our international partners, NASA needs to develop a plan that will extend the operation of the ISS beyond FY 2015.

Section 9. International Space Station Laboratory

This section would require the Administrator to submit a plan on how NASA will continue the ISS research activities described in the ISS National Laboratory report submitted to Congress in May 2007. This section also would require the Administrator to establish an ISS Utilization Advisory Committee that would make assessments and recommendations regarding effective utilization of the ISS for its entire lifespan. Finally, this section would establish a Research Fund that would support research activities related to the ISS.

Section 10. International Space Station Science Mission

This section would require the Administrator to plan and conduct a dedicated Shuttle mission to deliver the Alpha Magnetic Spectrometer and other scientific payloads to the ISS. The Alpha Magnetic Spectrometer is an international collaborative effort that NASA was committed to delivering to the ISS. However, the Alpha Magnetic Spectrometer was demanifested as a result of the compressed schedule brought on by the Columbia disaster and the decision to retire the Shuttle in 2010. The Committee believes that the Agency should honor its obligation to its international partners and deliver this important instrument to the ISS.

Section 11. Sense of Congress on Use of Space Life Sciences Laboratory at Kennedy Space Center

This section would express the sense of Congress that the Space Life Sciences Laboratory (SLSL) at Kennedy Space Center represents a key investment and asset in the ISS's National Laboratory capability and should be utilized to the maximum extent practicable in ISS-related research. The Committee believes this facility is ideally suited to support ISS-related science. In addition, the SLSL was developed as a Federal and State partnership, utilizing state funds, and represents a business model that can benefit the Agency, the local community, and the public. The Committee believes the Agency should encourage this type of external support and demonstrate its commitment to leverage these resources whenever practical.

Section 12. Science Policy

This section would reaffirm Congress's support for well-balanced support of scientific research by NASA and state that emphasis should be put on basic research and improved mechanisms for the sharing of scientific and research data and findings to non-government entities for applications development.

Section 13. Aeronautics

This section would express a sense of Congress that aeronautics research continues to be important to NASA's core mission and should be guided by a national aeronautics research policy. This section would require the Administrator to: (1) establish an initiative with the objective of enabling commercial aircraft performance characteristics, such as significant aircraft noise reduction near airports and significant reductions in greenhouse gas emissions compared to aircraft currently in commercial service; (2) align the aeronautics research program with the National Research Council's 2006 Decadal Survey of Civil Aeronautics; (3) establish a research program with industry participation to collect data on perceived noise levels, a metric used in rating jet aircraft noise, of sonic booms in order to develop appropriate standards that could allow for commercial overland supersonic flights; (4) conduct an independent review, through the National Research Council, of aviation safety-related research programs within NASA; and (5) implement, in cooperation with the U.S. Global Change Research Program and other appropriate Agencies, a research initiative to assess the impact of aviation on the climate, and if necessary, steps to mitigate that impact. This section also would require that any research and development activities of the Aeronautics Mission Directorate performed for another Mission Directorate would be funded by that Mission Directorate.

Section 14. Development of Enhanced-Use Lease Policy

This section would require the Administrator to develop an Agency-wide enhanced-use lease policy based upon sound business practices and lessons learned from demonstration centers. The criteria for the policy would include criteria for determining the economic value of an enhanced-use lease, measures for effectiveness of the program and its accounting procedures, and an annual reporting requirement. This section also would allow the NASA field centers

participating in enhanced-use leasing activity to retain 80 percent of any cash consideration received. The remaining 20 percent would be under the Administrator's jurisdiction. The Committee believes that allowing the field centers to keep a portion of the proceeds from enhanced-use lease agreements will provide an incentive to initiate such arrangements.

Section 15. Study on Leasing Practices of Field Centers

This section would require the Administrator to complete a study of the leasing practices of all field centers, including the Michoud Assembly Facility. The Committee is concerned about NASA's current leasing practices to tenants in multiple-use facilities. Specifically, the Committee believes that the practice of redistributing overhead and maintenance expenses among all the tenants — should one tenant vacate may be disruptive to the remaining tenants and introduce uncertainty that may prevent future tenants from entering into leasing arrangements.

Section 16. Study and Report on Project Assignment and Work Allocation of Field Centers

This section would require the Administrator to study and report on project assignments and work allocation across all field centers. The Committee is concerned with the limited transparency into how work assignment decisions are made and what current and future programs, projects, and roles are assigned to each field center. The Committee believes this report will provide insight into both this process and the current and future work assigned to the field centers. NASA is preparing to undergo a level of program change not experienced in a generation and this transition will significantly impact the centers and facilities that have traditionally focused on operational activities. This report will identify how the work assignments of these centers and facilities can be augmented and diversified to reduce the impact of this change and more fully utilize the resources of these centers.

Section 17. Interagency Study of Commercial Space Range Options

This section would require the Administrator, in cooperation with the Secretary of Defense and other appropriate Federal officials, to establish an interagency commission to study the issues related to establishing space launch facilities and a range that are dedicated to commercial space missions, and create a schedule for establishing such a range.

Section 18. Sense of Congress on Reestablishment of National Space Council in Executive Office of the President

This section would express the sense of Congress that the National Space Council should be reestablished. The Committee believes that space exploration, research, and commercialization are interdisciplinary activities with multiple and diverse stakeholders. Space programs, research, and infrastructure all have economic, national security, and global impact, and a diverse group of Federal agencies are responsible for various space-related projects, missions, and activities. The Committee believes the National Space Council can serve as a mechanism to unify these diverse priorities

and requirements and to develop and coordinate the President's national space policy, strategy, and long-range goals.

Section 19. Review of Suborbital Mission Capabilities

This section would require the Administrator to review NASA's suborbital mission capabilities, including existing programs, existing or planned launch facilities, and opportunities for research, training, or educational collaboration. The Committee supports the Agency's atmospheric, geophysical, and rocket research at the Poker Flat Range and the Kodiak Launch Complex, and encourages NASA to ensure the continuation and growth of that research.

Section 20. Initiation of Discussions on Development of Framework for Space Traffic Management

This section would direct the Administrator to initiate discussions with other space-faring countries to develop a framework for addressing space traffic management to promote safe access to space.

Section 21. Study on Export Control Policies Related to Civil and Commercial Space Activities

This section would require the Director of the Office of Science and Technology Policy to study the impact of current export control policies on the U.S. aerospace industry and the ability of Federal agencies to carry out cooperative activities in science, technology, and space flight. In carrying out this study, the Director of the Office of Science and Technology Policy would be required to assess and evaluate the impacts of such policies on national security concerns and needs.

Section 22. Near-Earth Objects

This section would require the Director of the Office of Science and Technology Policy to develop a policy for notifying Federal agencies and relevant emergency response institutions of an impending near-Earth object threat and recommend a Federal agency or agencies to be responsible for protecting the United States from a near-Earth object collision. This section also would require the Administrator to maintain a planetary radar that is comparable to the capability provided by the Deep Space Network Goldstone facility.

Section 23. Enhancement of Educational Role of National Aeronautics and Space Administration

This section would require the Administrator to develop a plan to enhance the utilization of the ISS to support NASA educational goals and to establish as a goal the funding of sounding-rockets, high-altitude balloon campaigns, suborbital flight opportunities, and small satellite payload opportunities to provide hands-on training for students and instructors in higher education. This section would require the Administrator to establish as a goal the funding of sounding rockets, high-altitude balloons, suborbital flight, and small satellite payload opportunities to provide hands-on training, learning, and research opportunities to students and instructors. This section would require the Administrator to establish a program of cooperative unmanned aerial vehicle development and ap-

plications in conjunction with university-based programs and assets. This section would authorize, for FY 2009, not less than $20 million in FY 2009 for the Experimental Program to Stimulate Competitive Research and not less than $32 million for the National Space Grant College and Fellowship Program.

Section 24. Establishment of Office of Program Analysis and Evaluation

This section would require the Administrator to establish an Office of Program Analysis and Evaluation to analyze and develop plans that would align the NASA's mission, budget, and performance with strategic goals.

Section 25. Methane Inventory

This section would require the Administrator, in conjunction with the Administrator of National Oceanic and Atmospheric Administration and other appropriate Federal agencies, to conduct an inventory of natural methane stocks and fluxes in the U.S. polar regions.

Section 26. Reduction-in-force Moratorium

This section would prevent NASA from initiating or implementing a reduction-in-force of permanent, non-Senior Executive Service, civil servant employees prior to December 31, 2010.

Section 27. Limit on the Use of Term Positions

This section would require the Administrator to limit the use of term positions to less than or equal to 10 percent of the total number of non-Senior Executive Service, civil servant employees.

Section 28. Protection of Scientific Credibility, Integrity, and Communication within the National Aeronautics and Space Administration

This section would express a sense of the Congress that the Agency should not dilute, distort, suppress, or impede scientific research or the dissemination thereof. This section also would require the Government Accountability Office to conduct a study, and report to Congress within 60 days after the date of enactment of this Act, to determine whether NASA is in compliance with regulations set forth in part 1213 of title 14, Code of Federal Regulations, on the release of information to news and information media.

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new material is printed in italic, existing law in which no change is proposed is shown in roman):

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ACT OF 1958

SEC. 315. ENHANCED-USE LEASE OF REAL PROPERTY DEMONSTRATION.

[42 U.S.C. 2459j]

(a) IN GENERAL.—Notwithstanding any other provision of law, the Administrator may enter into a lease under this section with any person or entity (including another department or agency of the Federal Government or an entity of a State or local government) with regard to any real property under the jurisdiction of the Administrator at no more than two (2) National Aeronautics and Space Administration (NASA) centers.

(b) CONSIDERATION.—

(1) A person or entity entering into a lease under this section shall provide consideration for the lease at fair market value as determined by the Administrator, except that in the case of a lease to another department or agency of the Federal Government, that department or agency shall provide consideration for the lease equal to the full costs to NASA in connection with the lease.

(2) Consideration under this subsection may take one or a combination of the following forms—

(A) the payment of cash;

(B) the maintenance, construction, modification or improvement of facilities on real property under the jurisdiction of the Administrator;

(C) the provision of services to NASA, including launch services and payload processing services; or

(D) use by NASA of facilities on the property.

(3)(A) The Administrator may utilize amounts of cash consideration received under this subsection for a lease entered into under this section to cover the full costs to NASA in connection with the lease. These funds shall remain available until expended.

[(B) Any amounts of cash consideration received under this subsection that are not utilized in accordance with subparagraph (A) shall be deposited in a capital asset account to be established by the Administrator, shall be available for maintenance, capital revitalization, and improvements of the real

property assets of the centers selected for this demonstration program, and shall remain available until expended.]

(B) Of any amounts of cash consideration received under this subsection that are not utilized in accordance with subparagraph (A)—

(i) 20 percent shall be deposited in a capital asset account to be established by the Administrator, shall be available for maintenance, capital revitalization, and improvements of the real property assets and related personal property under the jurisdiction of the Administrator, and shall remain available until expended; and

(ii) the remaining 80 percent shall be available to the respective center or facility of the Administration engaged in the lease of non-excess real property, and shall remain available until expended.

(c) ADDITIONAL TERMS AND CONDITIONS.—The Administrator may require such terms and conditions in connection with a lease under this section as the Administrator considers appropriate to protect the interests of the United States.

(d) RELATIONSHIP TO OTHER LEASE AUTHORITY.—The authority under this section to lease property of NASA is in addition to any other authority to lease property of NASA under law.

(e) LEASE RESTRICTIONS.—NASA is not authorized to lease back property under this section during the term of the out-lease or enter into other contracts with the lessee respecting the property.

(f) PLAN AND REPORTING REQUIREMENTS.—At least 15 days prior to the Administrator entering into the first lease under this section, the Administrator shall submit a plan to the Congress on NASA's proposed implementation of this demonstration. The Administrator shall submit an annual report by January 31st of each year regarding the status of the demonstration. *Such report shall include the following:*

(1) Information that identifies and quantifies the value of the arrangements and expenditures of revenues received under this section.

(2) The availability and use of funds received under this section for the Agency's operating plans.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AUTHORIZATION ACT OF 2005

SEC. 427. UNIVERSITY-BASED CENTERS FOR RESEARCH ON AVIATION TRAINING.

[42 U.S.C. 16727]

(a) IN GENERAL.—The Administrator [may] *shall* award grants to institutions of higher education (or consortia thereof) to establish one or more Centers for Research on Aviation Training under cooperative agreements with appropriate NASA Centers.

(b) Purpose.—The purpose of the Centers shall be to investigate the impact of new technologies and procedures, particularly those related to the aircraft flight deck and to the air traffic management functions, on training requirements for pilots and air traffic controllers.

(c) APPLICATION.—An institution of higher education (or a consortium of such institutions) seeking funding under this section shall

submit an application to the Administrator at such time, in such manner, and containing such information as the Administrator may require, including, at a minimum, a 5-year research plan.

(d) Award Duration.—An award made by the Administrator under this section shall be for a period of 5 years and may be renewed on the basis of—

(1) satisfactory performance in meeting the goals of the research plan proposed by the Center in its application under subsection (c); and

(2) other requirements as specified by the Administrator.

SEC. 501. SPACE SHUTTLE FOLLOW-ON.

[42 U.S.C. 16761]

(a) POLICY STATEMENT.—It is the policy of the United States to possess the capability for human access to space on a continuous basis.

(b) PROGRESS REPORT.—Not later than 180 days after the date of enactment of this Act and annually thereafter, the Administrator shall transmit a report to the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate describing the progress being made toward developing the Crew Exploration Vehicle and the Crew Launch Vehicle and the estimated time before they will demonstrate crewed, orbital spaceflight.

[(c) COMPLIANCE REPORT.—If, 1 year before the final planned flight of the Space Shuttle orbiter, the United States has not demonstrated a replacement human space flight system, and the United States cannot uphold the policy described in subsection (a), the Administrator shall transmit a report to the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate describing—**]**

(c) COMPLIANCE REPORT.—Not later than 90 days after the date of the enactment of the National Aeronautics and Space Administration Authorization Act of 2008, the Administrator shall submit to the appropriate congressional committees a report on the lack of a United States human space flight system to replace the Space Shuttle Orbiter and the ability of the United States to uphold the policy described in subsection (a), including a description of—

(1) strategic risks to the United States associated with the failure to uphold the policy described in subsection (a);

(2) the estimated length of time during which the United States will not have its own human access to space;

(3) what steps will be taken to shorten that length of time; and

(4) what other means will be used to allow human access to space during that time.

CONSOLIDATED APPROPRIATIONS ACT, 2008

[42 U.S.C. 2459j note]

SEC. 533. (a) Subsection (a) of section 315 of the National Aeronautics and Space Administration Act of 1958 (42 U.S.C. 2459j) is amended—

(1) by striking "Notwithstanding any other provision of law, the Administrator" and inserting "The Administrator"; and

(2) by striking "any real property" and inserting "any non-excess real property and related personal property"; and

(3) by striking "at no more than two (2) National Aeronautics and Space Administration (NASA) centers".

(b) Subsection (b) of such section is amended—

(1) in paragraph (1), by striking "consideration" and all that follows through the end of the paragraph and inserting "cash consideration for the lease at fair market value as determined by the Administrator.";

(2) by striking paragraph (2);

(3) by redesignating paragraph (3) as paragraph (2); and

[(4) in paragraph (2), as redesignated by paragraph (3) of this subsection—

[(A) in subparagraph (B), by striking "maintenance" and all that follows through "centers selected for this demonstration program" and inserting "capital revitalization and construction projects and improvements of real property assets and related personal property under the jurisdiction of the Administrator"; and

[(B) by adding at the end the following new subparagraph:

["(C) Amounts utilized under subparagraph (B) may not be utilized for daily operating costs.".]

(4) in paragraph (2), as redesignated by paragraph (3) of this subsection, by adding at the end the following new subparagraph:

"(C) Amounts utilized under subparagraph (B) may not be utilized for daily operating costs.".

(c) Subsection (e) of such section is amended—

(1) by striking "Lease Restrictions.—NASA" and inserting the following: "Lease Restrictions.—

"(1) NASA"; and

(2) by adding at the end the following new paragraph:

"(2) NASA is not authorized to enter into an out-lease under this section unless the Administrator certifies that such out-lease will not have a negative impact on NASA's mission.".

(d) Such section is further amended by adding at the end [the following new subsection (f):

"(f) Sunset.—The authority to enter] *the following:*

"*(g) SUNSET.—The authority to enter* into leases under this section shall expire on the date that is ten years after the date of the enactment of the Commerce, Justice, Science, and Related Agencies Appropriations Act of 2008. The expiration under this subsection of authority to enter into leases under this section shall not affect the validity or term of leases or NASA's retention of proceeds from leases entered into under this section before the date of the expiration of such authority.".

(e) The heading of such section is amended by striking "Enhanced-use lease of real property demonstration" and inserting "Lease of non-excess property".

(f) This section shall become effective on December 31, 2008.

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